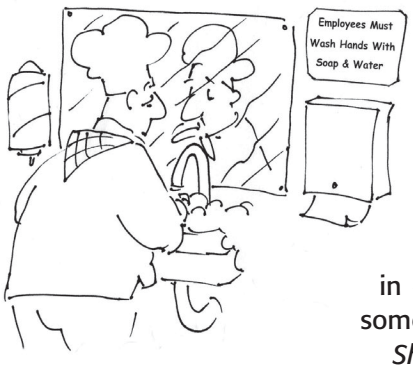
FOOD TALK

SANITATION TIPS FOR FOOD WORKERS

WINTER 2010



Want to Hear Another Reason to Wash Your Hands Frequently?

Have you ever heard of shigellosis? How about dysentery? Actually, they're the same thing—a nasty illness caused by a germ called *Shigella* that can be transmitted by food.

Shigella bacteria were discovered more than 100 years ago by a Japanese scientist named Kiyoshi Shiga. You might recognize his name in connection with a toxin—called Shiga toxin—which is also produced by some dangerous strains of *Escherichia coli,* such as *E. coli* O157:H7.

Shigella bacteria usually enter the food chain through contaminated water, cross contamination by flies, or unsanitary handling of foods—the so-called fecal-oral route (that's a scientific way of saying people don't wash their hands after going to the toilet).

The symptoms of shigellosis are not the sort of thing you talk about at the dinner table—abdominal pain, cramps, diarrhea, fever, vomiting, and blood in stools, among others. For most people, shigellosis is just unpleasant. But for young children, the elderly and the infirm it can be life threatening. Dehydration—a frequent side effect of dysentery—can result in death. Some individuals who are infected may have no symptoms at all, but may still pass the bacteria to others.

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Not all shigellosis outbreaks are caused by food. But some have been linked to salads (potato, tuna, shrimp, macaroni, and chicken), raw vegetables, milk and dairy products, and poultry.

What to Do

The spread of *Shigella* from an infected person can be stopped by frequent and careful handwashing with soap. Individuals with shigellosis should not prepare food or drinks for others until they have been shown to no longer be carrying the bacteria, or if they have had no diarrhea for at least two days, according to the Centers for Disease Control and Prevention.

How do you guard against dysentery? Easy—wash your hands. Handwashing with soap and running water may be the single most important way to stop transmission of shigellosis, the CDC says. Apart from young children in schools and day care centers, the most next most important group for the control of shigellosis are foodhandlers. So, scour the handwashing sink, fill up the soap container and lay in a supply of paper towels. You need to wash those bad bugs off your hands.

Also in this issue…

Gloves: Handle With Care

The use of gloves by food workers can create a false sense of security and can lead to more risky behavior and cross-contamination if employees are not properly trained, according to food safety expert Ewen Todd of Michigan State University, who led a major study of outbreaks linked to food workers.

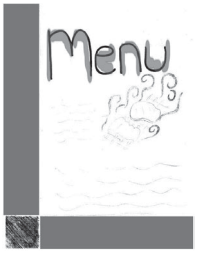
When gloves are worn properly, they can reduce the risk of pathogen transmission considerably, but glove users need to be careful, Todd and his colleagues reported in the September issue of the *Journal of Food Protection*.

Gloves should be considered an addition to and not a replacement for hand washing, according to the expert team. One key issue they found is how often food workers change their gloves. The tendency of food workers to wear the same pair of gloves for a long time, along with poor hand hygiene, might account for the apparent failure of gloves to reduce or prevent bacterial contamination, they said.

The failure to change gloves when they are contaminated or punctured is at least as common a problem as lack of hand washing, they said. A small percentage of unused gloves have pin hole leaks, and there is a risk of penetration by bacteria and viruses through the tiny holes. Fingernails—especially broken nails or long artificial nails—as well as rings and watches, are common causes of glove punctures, they said.

It's not a good idea to wash disposable gloves, because liquids can penetrate the gloves through undetected holes. And if you use a hand sanitizer before putting on new gloves, you need to dry your hands. If they are still wet with an alcohol-based product when the gloves are put on, it can increase the risk of perforation, they said.

What's on the Menu?



Plastic menus carry the most germs of any table-top items in restaurants, according to a study by researchers from the University of Arizona, who took swabs from containers of ketchup, mustard, salt, pepper, sugar—and menus—on tables of 12 restaurants in New York, Ohio and Arizona.

They examined the samples for total bacteria counts and coliforms—not just those that can cause foodborne illness. The menus carried an average count of 185,000 bacteria.

"You probably have about 100 times more bacteria on that menu than you do a typical toilet seat in the restroom," said Chuck Gerba of the University of Arizona, in a report on ABC's *Good Morning America*.

Pepper had the second-highest average count with 11,600 organisms.

"Bacteria do like pepper…There's stuff to grow there," Gerba said.

Sugar had the lowest count, with 2,300 bacteria. And the average count on ketchup, mustard and salt containers fell somewhere in between.

The experts say paper menus carry fewer germs than plastic ones. The plastic allows bacteria to hide and grow in tiny crevices that are too small to see.

Karen Speaks Spanish

USDA's "Ask Karen" food safety information service is now available in Spanish. Karen is a virtual food safety representative with information about preventing foodborne illness, safe food handling and storage, and safe preparation of meat, poultry, and egg products. Although the service was developed for consumers and educators, a lot of the information is relevant for professional food workers.

You can find Pregúntele a Karen online at http://pregunteleakaren.gov/.

More About Bad Bugs

If you want to learn more about the nasty bacteria, viruses or parasites that can cause foodborne illness, the *Bad Bug Book* is a great source. It is available from the Food and Drug Administration's website (just go to www.fda.gov and enter Bad Bug Book in the search box).

Nasty Bugs and What You Can Do About Them

BACTERIA

NAME	COMMON FOOD SOURCES	PREVENTION
Campylobacter jejuni	Raw chicken and raw milk.	Wash hands frequently. Cook chicken to a minimum internal temperature of 165 degrees F (74 degrees C) and use a food thermometer.
Shiga-toxin producing ***Escherichia coli*** *	Raw or rare hamburger or any other ground beef; unpasteurized milk; leafy greens.	Wash hands frequently. Cook ground beef patties to 160 degrees F (71 degrees C).
Listeria monocytogenes	Unpasteurized dairy products; processed meats and sandwiches.	Wash hands frequently. Clean and sanitize food preparation surfaces and utensils. Avoid cross-contamination with ready-to-eat foods.
Salmonella typhi *	Undercooked poultry, eggs or foods containing them; meat and dairy products; fresh cut melons.	Wash hands frequently. Cook thoroughly and chill rapidly; sanitize utensils and surfaces.
Shigella *	Salads (potato, tuna, shrimp, macaroni, and chicken); raw vegetables; milk and dairy products; poultry.	Wash hands frequently. Cook salad ingredients thoroughly and chill rapidly.
Staphylococcus aereus *(produces a toxin that causes illness)*	Cooked ham; protein salads; custard pastries; Hollandaise sauce; warmed over foods.	Wash hands frequently. Refrigerate at 41 degrees F (5 degrees C) after thorough cooking; hold at 135 degrees F (57 degrees C) or above (• See note).
Clostridium perfringens *(produces a toxin that causes illness)*	Stews gravies; meat pies held at warm temperatures.	Wash hands frequently. Cook thoroughly and chill rapidly; refrigerate at 41 degrees F (5 degrees C) or below; hold at 135 degrees F (57 degrees C) or above (• See note).
VIRUSES		
Hepatitis A *	Cold cuts and sandwiches; fruits and fruit juices; milk and milk products; vegetables; salads; shellfish; iced drinks.	Wash hands frequently and maintain good personal hygiene.
Norovirus *	Contaminated salad ingredients; raw clams; oysters.	Wash hands frequently. Refrigerate food at 41 degrees F (5 degrees C) or below; hold at 135 degrees F (57 degrees C) or above (• See note)
PARASITES		
Cryptosporidium parvum	Contaminated water; food contaminated by infected food handlers.	Wash hands frequently. Use potable water.
Cyclospora cayentanensis	Contaminated water; raw vegetables.	Wash hands frequently. Use potable water. Purchase ready-to-eat food from a reliable source.

* One of the "Big Five" pathogens that cause illnesses you should report to the person in charge.
• *Note: These are the recommended hot and cold holding temperatures in the 2009 FDA model Food Code.*

Test Yourself on Foodborne Pathogens

1. Which of these is *not* one of the "Big Five" pathogens that cause foodborne illness that should be reported to the person in charge?

a. *E. coli* O157:H7
b. *Shigella*
c. *Salmonella*
d. *Listeria monocytogenes*

2. Which of these *is* one of the "Big Five" pathogens?

a. *Clostridium*
b. *Campylobacter jejuni*
c. Norovirus
d. *Staphylococcus aureus*

3. Which of the following pathogens is a virus that can be transmitted by food.

a. *Cryptosporidium*
b. *Campylobacter*
c. Hepatitis A
d. *Salmonella*

4. The "danger zone" in which foodborne pathogens grow most quickly is between:

a. 41 and 220 degrees F (5 and 104 degrees C)
b. 32 and 140 degrees F (0 and 60 degrees C)
c. Zero and 220 degrees F (-18 and 104 degrees C)
d. 41 and 135 degrees F (5 and 57 degrees C)

5. All of these pathogens can cause foodborne illness. But one is a virus, two are parasites and one represents species of bacteria. Can you name the bacteria?

a. Hepatitis A
b. *Shigella*
c. *Cryptosporidium parvum*
d. *Cyclospora cayentanensis*

Answers: 1 (d), 2(c), 3(c), 4 (d), 5(b).

(Sources: Food and Drug Administration; Essentials of Food Safety & Sanitation, Prentice Hall).

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